Maryland Historical Trust

Maryland Inventory of Historic Properties number: CARR-1462.

Name: 6031/MD 97 OVER BIG PIPE CRK.

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended ___X___ Eligibility Not Recommended _____

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments:_____

_____

_____

Reviewer, OPS:_Anne E. Bruder_____ Date:__3 April 2001____

Reviewer, NR Program:__Peter E. Kurtze_____ Date:__3 April 2001____

MARYLAND INVENTORY OF HISTORIC BRIDGES **MHT No.** CARR-1462
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

SHA Bridge No. 6031 **Bridge name** MD 97 over Big Pipe Creek

LOCATION:
Street/Road name and number [facility carried] MD 97

City/town Union Mills **Vicinity** X

County Carroll

This bridge projects over: Road ____ **Railway**____ **Water** X ____ **Land** ____

Ownership: State ____X____ **County** ____ **Municipal** ____ **Other** ____

HISTORIC STATUS:
Is bridge located within a designated historic district? Yes ____X____ **No** ____
National Register-listed district X____ **National Register-determined-eligible district** ____
Locally-designated district ____ **Other** ____

Name of district Union Mills National Register Historic District (CAR-22)

BRIDGE TYPE:
Timber Bridge ____:
Beam Bridge ____ **Truss -Covered** ____ **Trestle** ____ **Timber-And-Concrete** ____

Stone Arch Bridge ____

Metal Truss Bridge ____

Movable Bridge ____:
Swing ____ **Bascule Single Leaf** ____ **Bascule Multiple Leaf** ____
Vertical Lift ____ **Retractile** ____ **Pontoon** ____

Metal Girder ____:
Rolled Girder ____ **Rolled Girder Concrete Encased** ____
Plate Girder ____ **Plate Girder Concrete Encased** ____

Metal Suspension ____
Metal Arch ____
Metal Cantilever ____

Concrete ____X:
Concrete Arch____ **Concrete Slab**____ **Concrete Beam** ____ **Rigid Frame** X____

Other ____ **Type Name** ____

CARR-1462

DESCRIPTION:

Describe Setting:

Bridge 6031 is located in Carroll County and carries MD Route 97 (Littlestown Pike) over Big Pipe Creek at Union Mills. The bridge is oriented on a line running northwest from Union Mills southeast towards Westminster. Big Pipe Creek flows from the northeast to the southwest beneath it.

Describe Superstructure and Substructure:

This structure is a two span reinforced concrete rigid frame bridge supported in the middle by a single pier wall. The entire length of the bridge, including the reinforced concrete approach slabs, is 113'-3". The 30'-0" clear roadway carries two lanes of traffic over the two 35'-0" clear arch spans. The bridge railing consists of reinforced concrete balustrades built according to state specifications resting on 9" high curbs. The pier wall, abutments, and wingwalls are all supported by reinforced concrete spread footings. The ends of the pier wall are triangular shaped.

Discuss Major Alterations:

Random repairs were made to the wearing surface and deck in 1990, but no major rehabilitation has been initiated.

HISTORY:

WHEN was bridge built (actual date or date range) 1934
This date is: Actual X **Estimated** _____
Source of date: Plaque _____ **Design plans** X **County bridge files/inspection form** _____
Other (specify) SHA Files

WHY was bridge built? To provide a reliable crossing of Route 97 over Big Pipe Creek, to meet local and regional transportation needs.

WHO was the designer State Roads Commission

WHO was the builder _____

WHY was bridge altered? [check N/A X **if not applicable]**

Was bridge built as part of organized bridge-building campaign? Yes X **No** ___
This bridge was built by the State Roads Commission as part of the Good Roads Movement.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events ____ **B- Person** _____
C- Engineering/architectural character X

NOTE: The inclusion of this bridge within the boundaries drawn for the Union Mills Historic District was almost certainly inadvertent. The period of significance of the district appears to be the late eighteenth and

the nineteenth century, and the bridge is not discussed in the nomination. The bridge does not contribute to the integrity of the district as described in the nomination.

Was bridge constructed in response to significant events in Maryland or local history? No__ Yes _X_
If yes, what event? This bridge was built during the 1930s as part of the Good Roads Movement during the period.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth & development of the area? No ____ Yes _X____

By providing a reliable crossing, as all concrete bridges did, this bridge promoted small-scale residential, commercial, agricultural, and industrial development along Route 97and other thoroughfares that fed into it.

Is the bridge located in an area which may be eligible for historic designation? No _ Yes X_____
Would the bridge add to _____or detract from _____historic & visual character of the possible district?
The bridge is located in the Union Mills Historic District.

Is the bridge a significant example of its type? No __ Yes _X_____

Concrete bridges are the largest component of Maryland's historic bridges. Their numbers reflect how quickly they became popular after their introduction to the state and the country at the opening of the twentieth century. Many in Maryland are purely functional structures, but their plastic nature made them amenable to graceful curves and ornamental parapets that reflected the influence of the City Beautiful movement during the first part of the twentieth century. The versatility and strength of reinforced concrete bridges, along with their plasticity, made them the preferred choice for bridges by state and county highway departments in Maryland and throughout the country in the 1910s. The standard plans of the State Roads Commission of the teens, twenties, and thirties made their use almost universal during that period.

While concrete bridges as a whole are very common in Maryland, reinforced concrete rigid frame bridges make up one of the smallest groups of historic bridge types in the state. There are probably only about a dozen such structures standing in the state under county or state control that were erected prior to 1945. The rigid frame bridge, unlike other reinforced concrete spans, is monolithic. It is characterized by a superstructure and substructure, including abutments, designed as a continuous unit. (Concrete balustrades, cast afterwards, are not part of the monolithic design.) The rigid frame was an important engineering advance for reinforced concrete bridges. It was developed by German engineers and Brazilian Emilio Baumgart around 1920, and introduced to the United States primarily through the efforts of New York engineer Arthur G. Hayden in 1922-1923.

Concrete rigid frame bridges became increasingly popular in the 1930s and 1940s. It was during this period that Maryland's few examples of the type were erected. These include bridges 1030 (1937, 1992) in Allegany County; BC-1406 (1938) and BC-3402 (1940) in Baltimore City; 5013 (1936) in Caroline County (1936); 6031 (1934) in Carroll County ; 10058 (1941) in Frederick County; 11018 (1937) in Garrett County; 13032 (1939) in Howard County; 21013 (1941), 21015 (1936), and 21016 (1936) in Washington County; and WO-801 (c.1930) in Worcester County. These bridges generally have one or two spans of between 30 and 60 feet; the longest, BC-1406, measures 68 feet. With the exception of WO-801, the history of which remains clouded, they were built by the state or the city of Baltimore.

CARR-1462

This bridge falls within the 1910-1940 period of significance for concrete bridges, during which reinforced concrete bridge construction was increasingly standardized in the state and particular subtypes, including the rigid frame, were introduced to the state road network.

Does bridge retain integrity [in terms of National Register] of important elements described in Context Addendum? No ____ Yes X____

Is bridge a significant example of work of manufacturer, designer and/or engineer? No X Yes __

Should bridge be given further study before significance analysis is made? No X Yes _____

It is believed that no further research is necessary to determine the eligibility of this bridge for listing in the National Register. It should be compared with the other concrete rigid frame bridges listed above and a determination should be made whether all of them (excluding 1030 in Allegany County, 13032 in Howard County, and WO-081 in Worcester County, which have lost their integrity) are eligible to the Register because of their rarity and/or good representation of the type, or just the best examples. Additional research, however, which could be conducted as part of any future National Register nomination prepared for the bridge, might provide further information about its history and environs.

BIBLIOGRAPHY:

Bridge inspection reports and files of the Maryland State Highway Administration.

Condit, Carl. *American Building*. Chicago: University of Chicago Press, 1968.

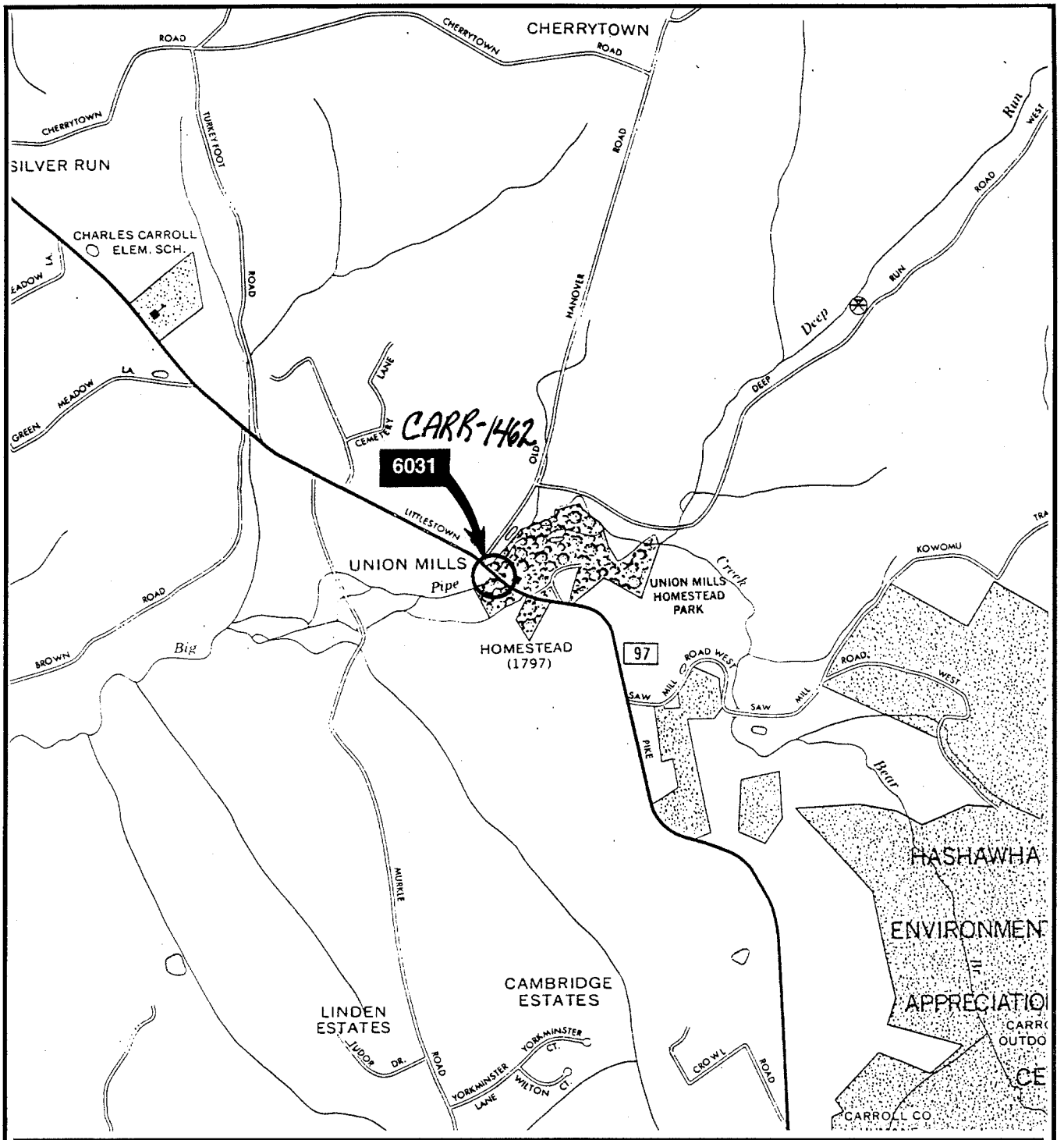
County survey files of the Maryland Historical Trust.

P.A.C. Spero & Company and Louis Berger & Associates, Inc. *Historic Bridges in Maryland: Historic Context Report*. Prepared for the Maryland State Highway Administration, September, 1994.

SURVEYOR/SURVEY INFORMATION:

Date bridge recorded 2/7/95

Name of surveyor David Diehl/Marvin Brown
Organization/Address GREINER, INC., 2219 York Road, Suite 200, Timonium, Maryland 21093-3111
Phone number 410-561-0100 **FAX number** 410-561-1150



Carroll County - Bridge Number 6031

MD 97 over Big Pipe Creek, 1934

Inventory # CARR-1462
6031
Name Md. 97 over Big Pipe Creek
County/State Carroll Co. Md.
Name of Photographer D. Diehl
Date 2-95

Location of Negative SHA

Description north approach looking south

Number 1 of 295

Inventory # CARR-1462
6031
Name Md. 97 over Big Pipe Creek
County/State Carroll Co. Md.
Name of Photographer D. Diehl
Date 2-95

Location of Negative SHA

Description south approach looking north

Number 2 ~~6~~ of ~~27~~ 5

Inventory # CARR-1462
6031
Name Md. 97 over Big Pipe Creek
County/State Carroll Co. Md.
Name of Photographer D. Diehl
Date 2-95

Location of Negative SHA

Description East elevation looking west

Number 3 ~~6~~ of ~~24~~ 5

Inventory # CARR-1462-6031

Name Md. 97 over Big Pipe Creek

County/State Carroll Co. Md.

Name of Photographer D. Diehl

Date 2-95

Location of Negative SHA

Description west elevation looking north

Number 4 of 25


BIG PINE CREEK BRIDGE
STATE ROADS COMMISSION

Inventory # CARR-1462
6031
Name Md. 97 over Big Pipe Creek
County/State Carroll Co. Md.
Name of Photographer D. Diehl
Date 2-95

Location of Negative SHA

Description plaque on bridge parapet

Number 5 8 of 29 5